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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/079,324	05/14/1998	JAMES W. OVERBECK	A1-04	8241

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EXAMINER

NAGPAUL, JYOTI

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/079,324	OVERBECK ET AL.	
	Examiner	Art Unit	
	Jyoti Nagpaul	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 102-104 and 116-153 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 102-104 and 116-153 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Amendment filed on July 24, 2006 has been acknowledged. Claims 102-104 and 116-153 are pending.

Response to Amendment

Rejection of Claims 102-104 and 116-121 as being anticipated by Roach (US 5770151) has been withdrawn in light of applicant's amendments.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claim 128** recites the limitation "said carrier". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 102-103, 116-117, 121, 123, 128-130, 134, 136, 141-143, 147 and 149** are rejected under 35 U.S.C. 102(b) as being anticipated by Mutschler (US 3329964).

With respect to Claim 102, Mutschler teaches a liquid ink recording apparatus. Mutschler teaches an aliquot carrier (50) comprising a fluid retaining aperture (10) and a deposit device/pin (14), the fluid retaining aperture (10) being constructed and cooperatively arranged with the deposit device /pin (14) so that the deposit device/pin

(14) can transit the fluid retaining aperture (10) to pick up a drop of fluid to be deposited on a deposit surface (17), internal surfaces defining the aperture (10) having a surface roughness that increases its wettability. (See Col. 4, Lines 33-35) (See Figures 1-3 and 6) With respect to Claim 103, this claim is directed to limitation in the method of making. Process limitation are and not germane to patentability in apparatus claims. With respect to Claims 117, 130 and 143, the fluid-retaining aperture (10) forms a mobile local fluid storage device (10) generally movable with the deposit device/pin (14). (See Figure 1) With respect to Claims 121, 123, 134, 136, 147 and 149, the fluid retaining aperture (10) is formed by a circular ring/cylindrical ring (13). With respect to Claim 128, Mutschler further teaches the fluid retaining aperture (10) mounted on a support rod (15) and constructed to move with the deposit device/pin (14) over a deposit surface (17) while carrying fluid, the fluid retaining aperture (10) including internal surfaces defining an opening (12) constructed and oriented to enable a tip of the deposit device/pin (14) to traverse the opening (12) and pick up a drop of fluid to be deposited on the deposit surface (14), wherein the internal surfaces defining the aperture (10) having surface increasing wettability of the carrier (10). With respect to Claim 141, Mutschler further teaches the fluid retaining aperture (10) mounted on a support rod (15) and constructed to move with the deposit device/pin (14) over a deposit surface (17) while carrying fluid, the fluid retaining aperture (10) including internal surfaces defining an opening (12) constructed and oriented to enable a tip of the deposit device/pin (14) to traverse the opening (12) and pick up a drop of fluid to be deposited on the deposit surface (14) by a linear displacement of the deposit device/pin (14) with

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respect to the fluid retaining aperture (10). (See Figures 1-3) With respect to surface roughness of the aperture (10), Mutschler is silent. However, some degree of surface roughness is present in any device. It would have been inherent that such surface roughness would enhance wettability of the surface.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 104, 122, 124-125, 135, 137-138, 148 and 150-151** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mutschler in view of Horie.

Refer above for the teachings of Mutschler.

Horie teaches a vaporizer apparatus that comprises a needle section and feed supply. The needle section comprises of a inner shell section that is made of material having a good wettability to the liquid feed material and the surface is treated with acid washing or sandblasting so as to have a specified surface finish such as surface roughness. (See Col. 6, Lines 46-60)

With respect to Claim 104, Mutschler fails to explicitly teach the surface roughness is at least 100 microinch.

It would have been obvious to a person of ordinary skill in the art to determine, through routine experimentation, the optimum value of surface roughness that would provide retention of fluid with need for excessive force to dislodge that fluid. (See Col. 6, Lines 46-60)

With respect to Claims 122,124-125, 135, 137-138 and 148,150-151, Mutschler fails to explicitly teach the fluid-retaining aperture is formed by an element including a multi-turn helical shape, open rectangular ring and a helical member.

It would have been obvious to a person of ordinary skill in the art to modify the device of Mutschler such that teach the fluid-retaining aperture is formed by an element

including a multi-turn helical shape, open rectangular ring and a helical member in order to guide the pin and accommodate different well shapes when inserted in the well.

9. **Claims 118-119, 131-132 and 141-145** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mutschler in view of Ecker.

Refer above for the teachings of Mutschler.

With respect to Claims 118-119, 131-132 and 141-145, Mutschler fails to explicitly teach the mobile local fluid storage device (10) is constructed and arranged to be replenished from a remotely located relatively large reservoir and wherein the large reservoir is constructed to store multiplicity of isolated fluid volumes.

Ecker teaches an ink jet printing apparatus. The device comprises of a mobile local fluid storage device (50) is constructed and arranged to be replenished from a remotely located relatively large reservoir (52) and wherein the large reservoir is constructed to store multiplicity of isolated fluid volumes. (See Figures 3 and 4)

It would have been obvious to a person of ordinary skill in the art to modify the device of Mutschler such that the mobile local fluid storage device (10) of Mutschler is constructed and arranged to be replenished from a remotely located relatively large reservoir and wherein the large reservoir is constructed to store multiplicity of isolated fluid volumes in order to provide diversity among the chemical reactions possible at the surface. (See Col. 2, Lines 35-40)

10. **Claims 120, 126-127, 133, 139-140, 146 and 152-153** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mutschler in view of Crandell.

Refer above for the teachings of Mutschler.

With respect to Claims 120, 133 and 146, Mutschler fails to explicitly teach the mobile fluid storage device is constructed to be inserted into a supply well plate. With respect to Claims 126-127, 139-140 and 152-153, Mutschler fails to explicitly teach the fluid-retaining aperture is constructed for immersion into a well of conventional 96 and 385 well plate.

Crandell teaches pin inoculators for adding bacteria to a standard 96-microwell test plate. Crandell teaches mobile fluid storage device (20) is constructed to be inserted into a supply well plate (30) and a fluid retaining aperture (72) is constructed for immersion into a well of convention 96 or 385 well plate.

It would have been obvious to a person of ordinary skill in the art to modify the device of Mutschler such that the mobile fluid storage device is constructed to be inserted into a supply well plate and the fluid-retaining aperture is constructed for immersion into a well of conventional 96 and 385 well plate in order inhibiting or diminishing the escaped of airborne droplets from wells thereby diminishing the chance of spreading contamination where the droplets contain bacteria or other contaminants. (See Col. 6, Lines 40-58)

Response to Arguments

Applicant's arguments with respect to claims 102-104 and 116-153 have been considered but are moot in view of the new ground(s) of rejection. See rejection above.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Nagpaul whose telephone number is 571-272-1273. The examiner can normally be reached on Monday thru Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JN


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